

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method ~~of displaying status information of a patient's heart rhythm~~ comprising:

providing a handheld patient-operated user-interface device for an implantable cardiac rhythm management device, the handheld patient-operated interface device being sized and shaped to fit comfortably within an average sized adult hand and having a more limited set of commands than a physician-operated user-interface device for the implantable cardiac rhythm management device, the handheld patient-operated user-interface device having a plurality of physically separated deadfront status indicator lamps[[],] comprising: (1) a normal rhythm indicative deadfront status indicator, (2) a contact caregiver indicative deadfront status indicator, (3) a therapy pending indicative deadfront status indicator, and (4) an abnormal rhythm indicative deadfront status indicator, the handheld patient-operated user interface device further comprising a case sized to be held within the patient's hand, and a self-contained power supply within the case, the deadfront status indicator lamps each including a deadfront icon that is illuminated for viewing on a front of the case, the icons differentiated from each other by the use of different non-textual-pictorial graphic shapes that convey information pictographically;

receiving a patient status query about device or patient status at querying an the handheld patient-operated interface and, in response to the patient status query, the handheld patient-operated interface communicating the patient status query to the implantable pulse-generating cardiac rhythm management device with the cardiac rhythm management device via wireless telemetry;

receiving, in response to the patient status query, status information from the implantable pulse-generating cardiac rhythm management device regarding the rhythm of the patient's heart;
and

displaying the status information obtained from the implantable cardiac rhythm management device visually using the status indicator lamps, the displaying comprising:

illuminating the normal rhythm indicative deadfront status indicator when the rhythm of the patient's heart is in normal rhythm;

illuminating the contact caregiver indicative deadfront status indicator when some function of the implantable cardiac rhythm management device or the heart rhythm are abnormal such that it is advisable for the patient to immediately contact the patient's medical caregiver;

illuminating the therapy pending indicative deadfront status indicator when a therapy has been scheduled by the implantable cardiac rhythm management device; and

illuminating the abnormal rhythm indicative deadfront status indicator when the rhythm of the patient's heart is in an abnormal rhythm and no therapy has yet been scheduled by the implantable cardiac rhythm management device.

2. (Original) The method of claim 1, further comprising generating an audible signal to communicate the status information in conjunction with the visual display.

3. (Original) The method of claim 2, wherein the audible signal is a voice signal.

4. (Original) The method of claim 3, wherein the voice signal includes natural language messages.

5. (Currently Amended) The method of claim 1, wherein the status information indicates that the patient's heart rhythm has been fast for more than forty-eight hours and, in response, concurrently illuminating the abnormal rhythm indicative deadfront status indicator and the contact caregiver indicative deadfront status indicator ~~a first deadfront status indicator lamp signaling fast rhythm and a second deadfront status indicator lamp signaling that the patient should contact a medical care provider~~ are illuminated simultaneously.

6. (Currently Amended) The method of claim 5, ~~wherein when the~~ comprising illuminating the abnormal rhythm indicative deadfront status indicator and the contact caregiver indicative

~~deadfront status indicator first and second deadfront status indicator lamps are illuminated to~~
signal a persistent fast rhythm condition, ~~without generating any no other visual or audible~~
~~signals are generated by the handheld patient-operated user-interface device cardiac rhythm~~
~~management device.~~

7. – 11. (Cancelled)

12. (Currently Amended) The method of claim 1, ~~wherein the cardiac rhythm management~~
~~device further includes a status inquiry button that is mounted in the case, and depressing the~~
~~comprising receiving at the handheld patient interface device a status inquiry button that causes~~
~~the cardiac rhythm management handheld patient interface device to query the implanted~~
~~implantable cardiac rhythm management device and receive information from the implanted~~
~~implantable cardiac rhythm management device.~~

13. – 20. (Cancelled)

21. (New) The method of claim 1, wherein the illuminating comprises activating an LED.

22. (New) The method of claim 1, wherein the illuminating comprises illuminating for a
specified period of time, then varying a persistence of the illuminating during a following second
period of time.

23. (New) The method of claim 1, wherein at least one of:

illuminating the normal rhythm indicative deadfront status indicator comprises
illuminating an icon depicting a heart shape;

illuminating the contact caregiver indicative deadfront status indicator comprises
illuminating an icon depicting a telephone shape;

illuminating the therapy pending indicative deadfront status indicator comprises
illuminating an icon depicting a heart shape with clock face; and

illuminating the abnormal rhythm indicative deadfront status indicator comprises illuminating an icon depicting a heart shape with a jagged line extending across the heart.

24. (New) The method of claim 1, wherein the icons are differentiated from each other by the use of different colors provided during the illuminating.

25. (New) A system comprising:

an implantable cardiac rhythm management device configured to detect electrocardiogram data of a patient's heart rhythm status and to provide a cardiac rhythm therapy to a patient;

a handheld patient-operated user-interface device, communicatively coupled to the cardiac rhythm management device, the user-interface device configured to deliver a first patient-initiated query command to the cardiac rhythm management device, to receive heart rhythm status information from the cardiac rhythm management device, and to provide the heart rhythm status information to the patient in response to the first query command, the heart rhythm status information including:

a normal rhythm indication if the heart rhythm status information is indicative of a normal heart rhythm;

an abnormal rhythm indication if the heart rhythm status information is indicative of an abnormal heart rhythm; and

a contact caregiver indication if the heart rhythm status information is indicative of a condition requiring the intervention of a physician;

wherein the cardiac rhythm management device is configured to record a current heart rhythm in response to the provided abnormal rhythm indication if the abnormal rhythm indication is provided in response to the first query command; and

wherein the cardiac rhythm management device is configured to record a current heart rhythm in response to a second patient-initiated query command delivered to the cardiac rhythm management device following the provided normal rhythm indication in response to the first query.

26. (New) The system of claim 25, wherein the cardiac rhythm management device is configured to record a current heart rhythm in response to the provided contact caregiver indication if the contact caregiver indication is provided in response to the first query command.

27. (New) The system of claim 25, wherein the user-interface device includes a plurality of physically separated deadfront status indicators configured to provide the heart rhythm status information to the patient, the plurality of deadfront status indicators differentiated from each other by the use of different pictorial graphic shapes that convey information pictographically.

28. (New) The system of claim 27, wherein the plurality of deadfront status indicators includes:

- a normal rhythm indicative deadfront status indicator;
- an abnormal rhythm indicative deadfront status indicator; and
- a contact caregiver indicative deadfront status indicator.

29. (New) The system of claim 28, wherein the normal rhythm indicative deadfront status indicator includes a green colored icon in a heart shape, the abnormal rhythm indicative deadfront status indicator includes a yellow colored icon in the shape of a heart with a sharp jagged line extending across the heart, and the contact caregiver indicative deadfront status indicator includes a red colored icon in the shape of a telephone having a base unit with a cross in the center of the base unit.

30. (New) The system of claim 25, wherein the user-interface device is configured to provide cardiac rhythm management device status information to the patient in response to the first query command, wherein the cardiac rhythm management device status information includes an indication of the current status of the cardiac rhythm management device; and
wherein the user-interface device is configured to provide heart rhythm status information if a therapy has not been scheduled by the cardiac rhythm management device.

31. (New) The system of claim 30, wherein the user-interface device is configured to provide the indication of the current status of the cardiac rhythm management device using a therapy pending indicative deadfront status indicator.

32. (New) The system of claim 31, wherein the therapy pending indicative deadfront status indicator includes an orange colored icon in a heart shape with a clock face positioned in the heart shape.

33. (New) A method comprising:

querying an implantable cardiac rhythm management device using a first patient-initiated query command from a handheld patient-operated user-interface device;

providing heart rhythm status information to the user-interface device from the cardiac rhythm management device in response to the first query command, the heart rhythm status information indicating the current status of a patient's heart rhythm using electrocardiogram data detected by the cardiac rhythm management device, the providing the heart rhythm status information including:

providing a normal heart rhythm indication if the detected electrocardiogram data is indicative of a normal heart rhythm;

providing an abnormal heart rhythm indication if the detected electrocardiogram data is indicative of an abnormal heart rhythm; and

providing a contact caregiver indication if the detected electrocardiogram data is indicative of a condition requiring the intervention of a physician; and

recording a current heart rhythm using the cardiac rhythm management device, the recording the current heart rhythm including:

recording the current heart rhythm in response to the provided abnormal heart rhythm indication if an abnormal heart rhythm indication is provided in response to the first query command; and

recording the current heart rhythm in response to a second patient-initiated query command from the user-interface device following a normal heart rhythm indication in response to the first query command.

34. (New) The system of claim 33, wherein the recording the current heart rhythm includes recording the current heart rhythm in response to the provided contact caregiver indication if the contact caregiver indication is provided in response to the first query command.

35. (New) The method of claim 34, wherein the providing the normal heart rhythm indication includes using normal rhythm indicative deadfront status indicator, the providing the abnormal heart rhythm indication includes using an abnormal rhythm indicative deadfront status indicator, and the providing the contact caregiver indication includes using a contact caregiver indicative deadfront status indicator.

36. (New) The method of claim 35, wherein the normal rhythm indicative deadfront status indicator includes a green colored icon in a heart shape, the abnormal rhythm indicative deadfront status indicator includes a yellow colored icon in the shape of a heart with a sharp jagged line extending across the heart, and the contact caregiver indicative deadfront status indicator includes a red colored icon in the shape of a telephone having a base unit with a cross in the center of the base unit.

37. (New) The method of claim 33, including:

providing cardiac rhythm management device status information to the user-interface device from the cardiac rhythm management device in response to the first query command, wherein the cardiac rhythm management device status information includes an indication of the current status of the cardiac rhythm management device; and

wherein the providing the heart rhythm status information includes providing heart rhythm status information if a therapy has not been scheduled by the cardiac rhythm management device.

38. (New) The method of claim 37, wherein the providing cardiac rhythm management device status information includes providing a pending therapy indication if a therapy has been scheduled by the cardiac rhythm management device.

39. (New) The method of claim 38, wherein the providing the cardiac rhythm management device status information includes using a therapy pending indicative deadfront status indicator.

40. (New) The method of claim 39, wherein the therapy pending indicative deadfront status indicator includes an orange colored icon in a heart shape with a clock face positioned in the heart shape.

41. (New) A system comprising:

an implantable cardiac rhythm management device configured to detect electrocardiogram data of a patient's heart rhythm status and to provide a cardiac rhythm therapy to a patient;

a handheld patient-operated user-interface device, communicatively coupled to the cardiac rhythm management device, the user-interface device configured to deliver a therapy request command to the cardiac rhythm management device, to receive heart rhythm status information from the cardiac rhythm management device, and to provide the heart rhythm status information to the patient in response to the therapy request command, the heart rhythm status information including:

a normal rhythm indication if the heart rhythm status information is indicative of a normal heart rhythm;

an abnormal rhythm indication if the heart rhythm status information is indicative of an abnormal heart rhythm;

a therapy pending indication if the heart rhythm status information is indicative of an abnormal heart rhythm that can be treated by the implantable cardiac rhythm management device; and

a contact caregiver indication if the heart rhythm status information is indicative of a condition requiring the intervention of a physician; and
wherein the cardiac rhythm management device is configured to deliver a therapy in response to the provided therapy pending indication if the therapy pending indication is provided in response to the therapy request command.

42. (New) The system of claim 41, wherein the user-interface device is configured to deliver a stop therapy request to the cardiac rhythm management device and the cardiac rhythm management device is configured to stop the therapy in response to the stop therapy request.

43. (New) The system of claim 41, wherein the user-interface device includes a plurality of physically separated deadfront status indicators configured to provide the heart rhythm status information to the patient, the plurality of deadfront status indicators differentiated from each other by the use of different pictorial graphic shapes that convey information pictographically.

44. (New) The system of claim 43, wherein the plurality of deadfront status indicators includes:

- a normal rhythm indicative deadfront status indicator;
- a therapy request indicative deadfront status indicator;
- an abnormal rhythm indicative deadfront status indicator; and
- a contact caregiver indicative deadfront status indicator.

45. (New) The system of claim 44, wherein the normal rhythm indicative deadfront status indicator includes a green colored icon in a heart shape, the therapy pending indicative deadfront status indicator includes an orange colored icon in a heart shape with a clock face positioned in the heart shape, the abnormal rhythm indicative deadfront status indicator includes a yellow colored icon in the shape of a heart with a sharp jagged line extending across the heart, and the contact caregiver indicative deadfront status indicator includes a red colored icon in the shape of a telephone having a base unit with a cross in the center of the base unit.

46. (New) A method, comprising:

requesting therapy from an implantable cardiac rhythm management device using a therapy request command from a handheld patient-operated user-interface device;

providing heart rhythm status information to the user-interface device from the cardiac rhythm management device in response to the therapy request command, the heart rhythm status information indicating the current status of the patient's heart rhythm using electrocardiogram data detected by the cardiac rhythm management device, the providing the heart rhythm status information including:

providing a normal heart rhythm indication if the heart rhythm status information is indicative of a normal heart rhythm;

providing a therapy pending indication if the heart rhythm status information is indicative of an abnormal heart rhythm that can be treated by the implantable cardiac rhythm management device;

providing an abnormal heart rhythm indication if the heart rhythm status information is indicative of an abnormal heart rhythm that cannot be treated by the implantable cardiac rhythm management device; and

providing a contact caregiver indication if the heart rhythm status information is indicative of a condition requiring the intervention of a physician; and

delivering a therapy to the patient using the implantable cardiac rhythm management device in response to the provided therapy pending indication if the therapy pending indication is provided in response to the therapy request command.

47. (New) The method of claim 46, wherein the providing the normal heart rhythm indication includes using normal rhythm indicative deadfront status indicator, the providing the therapy pending indication includes using a therapy pending indicative deadfront status indicator, the providing the abnormal heart rhythm indication includes using an abnormal rhythm indicative deadfront status indicator, and the providing the contact caregiver indication includes using a contact caregiver indicative deadfront status indicator.

48. (New) The method of claim 47, wherein the normal rhythm indicative deadfront status indicator includes a green colored icon in a heart shape, the therapy pending indicative deadfront status indicator includes an orange colored icon in a heart shape with a clock face positioned in the heart shape, the abnormal rhythm indicative deadfront status indicator includes a yellow colored icon in the shape of a heart with a sharp jagged line extending across the heart, and the contact caregiver indicative deadfront status indicator includes a red colored icon in the shape of a telephone having a base unit with a cross in the center of the base unit.

49. (New) A system comprising:
an implantable cardiac rhythm management device configured to detect electrocardiogram data of a patient's heart rhythm status and to provide a cardiac rhythm therapy to a patient;

a handheld patient-operated user-interface device, communicatively coupled to the cardiac rhythm management device, the user-interface device configured to deliver a patient-initiated query command to the cardiac rhythm management device, to receive heart rhythm status information from the cardiac rhythm management device, and to provide the heart rhythm status information to the patient in response to the patient-initiated query command, the heart rhythm status information including:

a normal rhythm indication if the heart rhythm status information is indicative of a normal heart rhythm;

an abnormal rhythm indication if the heart rhythm status information is indicative of an abnormal heart rhythm;

a therapy pending indication if the heart rhythm status information is indicative of an abnormal heart rhythm that can be treated by the implantable cardiac rhythm management device; and

a contact caregiver indication if the heart rhythm status information is indicative of a condition requiring the intervention of a physician; and

wherein the cardiac rhythm management device is configured to withhold a therapy in response to a patient-initiated withhold therapy command delivered to the cardiac rhythm

management device following the provided therapy pending indication in response to the patient-initiated query command.

50. (New) A method comprising:

querying an implantable cardiac rhythm management device using a patient-initiated query command from a handheld patient-operated user-interface device;

providing heart rhythm status information to the user-interface device from the cardiac rhythm management device in response to the first query command, the heart rhythm status information indicating the current status of a patient's heart rhythm using electrocardiogram data detected by the cardiac rhythm management device, the providing the heart rhythm status information including:

providing a normal heart rhythm indication if the detected electrocardiogram data is indicative of a normal heart rhythm;

providing an abnormal heart rhythm indication if the detected electrocardiogram data is indicative of an abnormal heart rhythm;

providing a therapy pending indication if the detected electrocardiogram data is indicative of an abnormal heart rhythm that can be treated by the implantable cardiac rhythm management device; and

providing a contact caregiver indication if the detected electrocardiogram data is indicative of a condition requiring the intervention of a physician; and

withholding therapy in response to a patient-initiated withhold therapy command delivered to the cardiac rhythm management device following the provided therapy pending indication in response to the patient-initiated query command.

51. (New) A system, comprising:

a handheld patient-operated user-interface device configured to communicate with an implantable cardiac rhythm management device, the user-interface device including:

a wireless telemetry circuit configured to provide communication between the user-interface device and the implantable cardiac rhythm management device;

a visual communication device configured to provide visual communication between the user-interface device and a patient;

a first battery configured to provide power to the wireless telemetry circuit; and

a second battery, separate from the first battery, the second battery configured to provide power to the visual communication device.

52. (New) The system of claim 51, wherein the first battery is non-user replaceable.

53. (New) The system of claim 51, including an audible communication device configured to provide audible communication between the user-interface device and a patient; and wherein the second battery is configured to provide power to the audible communication device.

54. (New) A method, comprising:
providing power for wireless communication between a handheld patient-operated user-interface device and an implantable cardiac rhythm management device using a first battery; and
providing power for visual communication between the user-interface device and a patient using a second battery, wherein the second battery is separate from the first battery.

55. (New) The method of claim 54, wherein the second battery includes a non-user replaceable battery.

56. (New) The method of claim 54, including providing power for audible communication between the user-interface device and the patient using the second battery.